

IN THE CLAIMS:

Please amend the Claims as follows:

Please cancel Claim 37

REMARKS

Consideration of the amendment is respectfully requested. The amendments find support in the application as originally filed and adds no new matter pursuant to 37 C.F.R. 1.121(f). The amendments are made pursuant to 37 C.F.R. 1.121.

Regarding the Examiner's rejection of Claim 35, Claim 35 is similar to original Claim 17. Accordingly, if the claim language for Claim 35 is not supported by the specification than the **Final Rejection set forth in the Office Action dated 10/01/2002 should be withdrawn.**

Status of Claims

Claims 20-36 and 38 are pending in this application.

Claim 37 has been cancelled.

Claims

Regarding paragraphs 2-3 of the Office Action, Claim 20-38 have been rejected by the Examiner under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, has possession of the claimed invention.

Applicants traverse the Examiner rejection based on the reasons set forth below.

As to **Claims 20-24 and 28**, the Examiner states

These claims are not supported by the originally filed specification because a "low allowable error threshold" and a "higher allowable error threshold" was not described in the originally filed specification. Applicant's

specification at page 8, line 14 to page 9 line 2 describes using a more powerful FEC for foveated layer 12 and a weaker FEC for the background layer 14 but does not describe an "error threshold".

Applicants disagree with the Examiner's characterization since the specification explicitly describes and provides clear antecedent basis for "low allowable error threshold" and a "higher allowable error threshold" on page 9, lines 6-8 of the originally filed specification.

Nevertheless, Detailed Description of the Invention on page 8, line 14 through page 9, line 2, the specification states

The partitioning of the data streams allows different error correction thresholds to be used for the foveated and background data streams. A more powerful forward error correction (FEC) algorithm can be used for foveated layer 12 which takes additional time and/or overhead, while a weaker FEC and error resilient scheme can be applied to the background layer 14 with reduced overhead and delay. A significant advantage of the use of the dual data bit streams of the present invention, is that the available time for FEC-type activity can be dynamically allocated to the foveated or background data streams in a proportion relative to the importance of error correction for that particular bit stream, producing a significant improvement in the received image display. (Emphasis added)

Furthermore, on page 9, lines 3-8, the specification states

Alternatively, in some applications, the ARQ communications protocol can be more efficient than a FEC algorithm for error correction. Repetitive transmission of data packets that contain more errors than a predetermined error threshold is entirely at a designers discretion. For example, a low allowable error threshold can be set for foveated layer 12, and a significantly higher allowable error threshold can be set for the background layer 14. (Emphasis added)

Accordingly, the specification does describe and provide clear antecedent basis for "low allowable error threshold" and "higher allowable error threshold." Moreover, the specification describes for the term "error threshold."

In view of the above remarks, the rejection under 35 USC 112, first paragraph should be withdrawn and the Claim 20 allowed.

Regarding Claims 21-24, such Claims depend directly or indirectly from Claim 20

and are thus allowable for the reasons set forth above.

Regarding **Claims 25-36 and 38**, the Examiner states that

These claims are not supported by the originally filed specification because the decoding and correcting in Claim 25 at lines 19-24 were not described by the originally filed specification. Applicants specification at page 9 lines 9-16 and page 13 lines 10-15 describes the process performed by the receiving device but it does not describe that which is claimed.

With regard to **Claim 25**, on page 3, line 14 through page 4, line 4, the specification describes

A method for improving real-time video communications using a foveation-based error resilience algorithm. In a preferred embodiment of the present invention, a real time processing module splits a video image into at least two data streams based on an operator pointing device or a pattern filter definition of "areas of importance." These different data streams, consisting of a foveated area and a background area, are then processed via different error correction algorithms based on the importance of correction errors in the data streams.

The important areas are protected using error-correction algorithms and error resilient codec features, and the less important areas are transmitted using less protection via error correction and error resilience. This provides greater protection to the video data in more perceptually important regions over that of less important regions, so the reconstructed video quality is significantly improved over that of conventional techniques.

On page 9, lines 9-16, the specification states

At a receiving device, processes which reverse the steps applied at the transmitter are applied to the received data bit streams to decode the bitstream and detect and correct any errors that occurred during the transmission. In the preferred embodiment, a third high priority processing step is applied to the foveated data bit stream signal and a fourth low priority is applied to process the background data bit stream signal. The dual signals are then recombined to display a restored high quality copy of the original image on a remote display device. (Emphasis added)

On page 13, lines 10-15, the specification states

Decoder 44 reverses the encoding of encoder 42 and performs any necessary error corrections and/or request for retransmissions. Such requests for

retransmission would typically be in the form of conventional ACK/NAK signals that are routinely sent to a transmitter by a receiving station. Finally, receiving device reassembles the data to its original form and sends it to a display or recording device. (Emphasis added)

Regarding the language of Claim 25, the partitioned “the data streams” using “different error correction thresholds” are used for “the foveated and background data streams.” These data streams are sent to a receiving device where the data streams are decoded and corrected. In view of the above passages for the originally filed specification, the decoder decodes the foveated data stream separately from the background data. Furthermore, the corrections of such different data streams are corrected. Moreover, the data in the original form is displayed after decoding and correction. Thus, Applicants strong assert that the specification as originally filed does support the claim language as set forth in Claim 25. Furthermore, the exact language in a claim does not have to appear in the specification. The specification must provide a description of and antecedent basis for the claim language. The specification clearly provides for decoding and correcting in the manner as claimed since the receiver reverses the processes of the transmitter as described on Detailed Description of the Invention on page 9, lines 9-16.

Accordingly, in view of the above remarks, the rejection under 35 USC 112, first paragraph should be removed and Claim 25 allowed.

Regarding **Claim 28**, the Examiner is directed to the remarks set forth above in regards to Claim 20. The specification provide clear antecedent basis for “low allowable error threshold” and a “higher allowable error threshold”. Accordingly, the rejection under 35 USC 112, first paragraph should be withdrawn.

Regarding **Claim 35**, the Examiner states

This claim is not supported by the originally filed specification because the claimed “transmitting a return error signal for changing the foveation point” was not described by the originally filed specification. Applicant’s specification at page 9 line 17 to page 10 line 11, page 12 line 15 to page 13 line 2 and page 13 lines 10-15 describes requesting retransmission but did not describe “transmitting a return error signal for changing the foveation point”.

The claim language of Claim 35 was found in original Claim 17, previously cancelled and rewritten as Claim 35. Accordingly, the specification has been amended to include the claim language now found in Claim 35. No new matter has been entered. Accordingly, the rejection under 35 USC 112, first paragraph should be withdrawn.

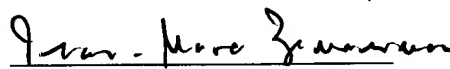
Regarding Claim 37, Claim 37 has been canceled.

Claims 26-36 and 38 depend from independent Claim 25. Thus, for the same reasons set forth above with regard to Claim 25 and Claims 28 and 35, Claims 26-36 and 38 are allowable over the prior art of record.

CONCLUSION

In view of the foregoing remarks and amendments, the Applicants believe that they have overcome all of the examiner's basis for rejection, and that this application therefore stands in condition for allowance. However, if the Examiner is of the opinion that such action can not be taken, the Applicants request that he contact their undersigned attorney at (908) 654-8000 in order to resolve any outstanding issues without the necessity of issuing another Office Action.

Respectfully submitted,



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Dated: November 26, 2002
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